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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/632,471

08/01/2003

Paul J. Steffan

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08/26/2004

THE LAW OFFICES OF MIKIO ISHIMARU  
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EXAMINER

STEVENSON, ANDRE C

ART UNIT

PAPER NUMBER

2812

DATE MAILED: 08/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.	Applicant(s)	
10/632,471	STEFFAN ET AL.	
Examiner	Art Unit	
Andre' C. Stevenson	2812	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☐ Claim(s) \_\_\_\_ is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 11-20 is/are allowed.
- 6) ☒ Claim(s) 1-4 is/are rejected.
- 7) ☐ Claim(s) 5-10 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. ____.  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date ____.   | 6) <input type="checkbox"/> Other: ____.                                    |

**DETAILED ACTION**

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims rejected under 35 U.S.C. 102(b) as being unpatentable by Leedy (U.S. Pat. No.5654127).

Leedy (U.S. Pat. No.5654127), for **Claim #1**, a method of testing an integrated circuit comprising: providing a semiconductor substrate having a semiconductor device provided thereon; forming a first dielectric layer over the semiconductor substrate (**column 9, line 33 through 53**); forming a first channel in the first dielectric layer in contact with the semiconductor device (**column 14, line 21 through 35**); forming a first contact pad mask layer; forming a first contact pad in the first contact pad mask layer in contact with the first channel; using the first contact pad to test the first channel and the semiconductor device; and removing the first contact pad mask layer and the first contact pad, (**column 8, line 16 through 22, column 6, line 33 through 57**).

With respect to **Claim #2**, a method as claimed in claim 1 additionally comprising; using a tester having a microprobe; and wherein: using the first contact pad includes

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forming the first contact pad for contact by the microprobe, is taught by Leedy (U.S. Pat. No.5654127), (abstract).

Furthermore, **Claim #3**, a method as claimed in claim 1 additionally comprising:  
forming the first contact pad mask layer uses a photoresist, is taught by Leedy (U.S. Pat. No.5654127), (column 6, line 33 through 57, line 62 through 67, column 7, line 1 through 12).

Considering now **Claim #4**, method as claimed in claim 1 additionally comprising:  
forming the first contact pad forms a material selected from a group consisting of copper, aluminum, gold, silver, a compound thereof, and a combination thereof, is taught by Leedy (U.S. Pat. No.5654127), (column 9, line 33 through 53, column 14, line 21 through 35, column 8, line 16 through 22, column 6, line 33 through 57).

### **Objected Claims**

Claims 5 through 10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claim #5

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- ✓ Removing the first contact pad mask layer and the first contact pad uses polishing.

Claim #6

- ✓ Forming a second contact pad in the second contact pad mask layer in contact with the channel.

### **Allowable Subject Matter**

The following is an examiner's statement of reasons for allowance: While the prior art teaches different channels and the presents of a dielectric layer the prescribe testing surface; However, the prior art fails to teach the forming of a second contact pad in the second contact pad mask layer in contact with the second channel and using the second contact pad to test via and second channel.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Claims 11 through 20 are allowed.

Claim #11

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- Forming of a second contact pad in the second contact pad mask layer in contact with the second channel; using the second contact pad to test via and second channel.

#### Claim #16

- Forming a contact pad in the contact pad mask layer in contact with an element selected from a group consisting of the first channel, the via, the second channel and a combination thereof.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866 – 217 – 9197 (toll-free).

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andre C. Stevenson whose telephone number is (571) 272 1683. The examiner can normally be reached on Monday through Friday from 8:00 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Niebling, can be reached on (571) 272 1679. The fax phone number for the organization where this application or proceeding is assigned is (703) 308 7724.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308 1782. Also, the proceeding numbers can be used to fax information through the Right Fax system;

- **703 872 9306**

Andre C. Stevenson Sr.

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08/18/04



John F. Niebling  
Supervisory Patent Examiner  
Technology Center 2800